

REMARKS/ARGUMENTS

Claims 1 through 6 are pending, with Claim 1 being the independent claim. Claim 1 was amended. Claims 1-5 are pending, with Claim 1 being the independent claim.

The Abstract of the Disclosure has been edited and the terms objected to by Examiner have been removed. Withdrawal of the objection is respectfully requested.

Claims 1-3 stand rejected under 35 U.S.C. §102(b) as anticipated by DE 77 033395 (DE '395) and, separately, by US 4,263,488 (Freitag). Claims 1-5 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent 5,862,893 (Völpel). Withdrawal of the rejections is respectfully requested in light of the above amendment to Claim 1 and further in view of the following remarks.

The present invention discloses a vibration damper provided with a fire safety device, which prevents disengagement between a cylinder and a piston. The fire safety device comprises a piston rod guide fixed to the cylinder and capable of displacing relative to the cylinder under certain thermal conditions, a stop disk and at least one bead. To prevent disengagement between the piston and cylinder, and as recited in amended independent Claim 1, a stop disk is mounted on the piston rod so as to engage a projection that extends along a limited portion of the periphery of the inner wall of the cylinder. Because the projection extends only along a portion of the periphery of the cylinder's inner surface and because the stop disk is larger than the piston, the piston rod tilts relative to the central axis of the cylinder. This displacement of the piston rod causes the piston to wedge against the cylinder and, thus, to prevent disassembly of the damper. As a consequence, the inventive device may be used repeatedly without a need for reassembling its components.

All of the cited references employ either multiple projections or a single continuous projection extending around the entire periphery of the cylinder, and a piston having a diameter at least as large as a diameter of stop disk. The teaching of the endless projection or multiple projections extending around the entire periphery of the cylinder leads to a uniformly distributed pressing force generated by the projection(s) upon the stop disk. As a consequence, the piston rod and the cylinder may have limited tilting displacement relative to one another. The substantially uniformly dimensioned stop disk and piston also limit tilting displacement between the cylinder and the piston. As a result, the respective devices can be used only for a single fire-safety operation.

In particular, DE '395 teaches a piston (4) having an outer diameter either equal to or greater than an outer diameter of stop disk (9). As illustrated in FIG. 4, projections (12) extend along the entire inner periphery of the cylinder. Thus, DE '395 does not teach or suggest the stop disk which is larger than the piston, as recited in amended claim 1. Accordingly, Claim 1 is not anticipated by DE '395. Claims 2 and 3 depend from Claim 1 and, as a consequence, are not anticipated by DE '395. Withdrawal of the rejection of claims 1-3 over DE '395 is requested.

Similarly, Freitag discloses a piston (3) that has a diameter which is at least as large as the diameter of a stop disk (11) and a single continuous peripheral projection (27). Accordingly, Freitag does not teach or suggest the structure as recited in amended independent Claim 1.

Thus, independent Claim 1 and dependent Claims 2 and 3 are not anticipated by Freitag and withdrawal of this 35 U.S.C. §102(b) rejection of Claims 1-3 is respectfully requested.

Völpel discloses a structure having a piston and a stop disk provided with a substantially uniform diameter as well as an endless projection. Therefore, Völpel does not anticipate amended independent Claim 1 and dependent Claims 2-5. Accordingly, the 35 U.S.C. § 102(b) rejection of Claims 1-5 in view of Völpel should be withdrawn.

Based on all of the above, it is respectfully submitted that the present application is now in proper condition for allowance. Prompt and favorable action to this effect and early passing of this application to issue are respectfully solicited.

It is believed that no fees or charges are required at this time in connection with the present application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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